

An Investigation of Regulations for Testing Emerging Pollutants in Aquatic Ecosystems: The Case of the Kaduna State Water Utility in Nigeria.

Theme 1: Emerging Pollutants in Aquatic Ecosystems

1. Introduction



The presence and investigation to detect emerging pollutants in aquatic ecosystems is an issue of global concern. Particularly worrisome for African Water Ecosystems – linked to lack of advanced equipment and regulations.



Associated with pharmaceuticals, personal care products, such as for health, beauty, and cleaning purposes



They are subsequently channelled into sewage/drainage systems and into water bodies

2. Objectives

To investigate:

- i. The presence of a framework/regulation for testing emerging pollutants in aquatic ecosystems.
- ii. The availability of advanced equipment required for testing emerging pollutants in water systems.



4. Exploratory

3. Key Issues

- i. Regulatory and testing Frameworks
- ii. Contextual Factors, such as WASH Systems and information.
- iii. Scarcity of clean water
 - Population growth
 - Aged water supply infrastructure
 - Climate Change



Picture showing washing/laundry activities at a water intake in Zaria - Kaduna State

6. Policy Implications

- The need to expand existing regulations.
- The need for a policy to help mitigate water scarcity.

5. Results

- i. The lack of an expanded framework
- ii. The lack of regulation, policy and knowledge to help enforce the testing and detection of emerging pollutants in aquatic ecosystems
- iii. Information/knowledge and the Water, Sanitation and Hygiene (WASH) system in Kaduna State are weak
 - Existence of Open Defecation (ODF)
 - Existence of onsite soak-out/pit latrines and boreholes/wells within close distance or on the same premises.

Table 1: Samples of Residential Buildings with Onsite Soak Out and Borehole on the same premises

On Plot Size (Meters)	On Plot Size (Meters)	On Plot Size (Meters)	Remarks
30 m x 15 m	15 m x 15 m	7.5 m x 7.5 m	Not within Recommended Standard of 10, 12 and 30 meters

Source: Field Data

- No permit or enforcement to reflect regulations for drilling private boreholes to ensure standards/best practices
- No central sewerage network – leading to private soak-out or pit toilets